

REMARKS/ARGUMENTS

Favorable reconsideration of this application in light of the following discussion is respectfully requested.

Claims 1-17 and 20 are pending in the present application, Claims 1-17 and 20 having been amended, and Claims 18-19 and 21 having been canceled without prejudice or disclaimer. Thus, no new matter is added.

In the Office Action dated April 14, 2008, Claims 18-21 were rejected under 35 U.S.C. § 101 as directed to non-statutory subject matter; Claims 1-21 were rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the enablement requirement; Claims 1-21 were rejected under 35 U.S.C. § 103(a) as unpatentable over McCormack et al. (U.S. Pat. Pub. No. 2004/0213206, hereinafter “McCormack”) in view of Mayhew et al. (U.S. Pat. Pub. No. 2004/0128410, hereinafter “Mayhew”); and Claims 1-21 were rejected under 35 U.S.C. § 103(a) as unpatentable over Ozawa et al. (U.S. Pat. No. 7,023,858, hereinafter “Ozawa”) in view of Bailey et al. (U.S. Pat. Pub. No. 2002/010, hereinafter “Bailey”) and in further view of Official Notice, citing Settle et al. (U.S. Pat. No. 6,233,253) and Coffin, III et al. (U.S. Pat. No. 7,281,186).

REJECTIONS UNDER 35 U.S.C. §101

Claim 20 has been amended to recite a computer readable tangible storage medium encoded with a computer program configured to cause an information processing apparatus to execute a method, and thus define statutory subject matter. Thus, it is respectfully submitted that the 35 U.S.C. § 101 rejection of Claim 20 has been overcome. Claims 18, 19 and 21 are canceled, making this rejection moot with respect to these claims.

REJECTIONS UNDER 35 U.S.C. §112

Regarding the 35 U.S.C. §112, first paragraph rejection, page 2 of the Official Action appears to assert that packets from the data handling nodes and the network node are

equivalent, and further appears asserts that the data handling nodes are all on the same IP-based packet network.

However, by way of a non-limiting example, Applicant's Figure 4 depicts the claimed network interface including an Enhanced Network Interface Card (ENIC) NI1 to NI11, which differs from a standard network interface card. As described in Applicant's specification at least on pages 23-35, one of the "data handling nodes" in this interface is the network processor 20, which acts as the input/output to a packet based network (via an Ethernet switch 2 – see Figure 1). The other data handling nodes are, for example, audio/video nodes 218 – 224 (which can route to studio equipment – e.g. see Figure 1, Network Interface 4 (NI4) and associated VTRs 1, 2 and 3). The network processor 20 handles, for example, IP-based network packets. The other data handling nodes handle, for example, data routed internally within the network interface by use of data tags used in place of the IP packet headers, via packetiser/depacketiser 24.

Accordingly, the packets received by the network processor 20 from the packet based network are necessarily different from those at other data handling nodes, as defined in parts (a) and (b) of Claim 1, respectively. Thus, the 35 U.S.C. §112, first paragraph, rejection is believed to be overcome.

REJECTIONS UNDER 35 U.S.C. § 103

Rejection of Claims 1-21 as unpatentable over McCormack and Mayhew.

The Official Action has rejected Claims 1-21 under 35 U.S.C. § 103 as unpatentable over McCormack and Mayhew. The Official Action asserts that McCormack describes all of the Applicant's claimed features with the exception of the case of a data packet having an associated packet identifier in accordance with the Applicant's claims. However, the Official Action cited Mayhew as describing this more detailed aspect of the Applicant's claimed advancements, and states that it would have been obvious, to one of ordinary skill in the art at

the time the advancements were made, to combine the cited references for arriving at the Applicant's claims. Applicant respectfully traverses the rejection.

Applicant's amended Claim 1 recites a network interface configured to connect to a packet-based data network on which a plurality of different types of payload data are distinguished by network-based packet header data, said network interface comprising:

- a plurality of data handling nodes; and
- a routing arrangement responsive to a packet identifier configured to route data packets between said data handling nodes, wherein
 - one of said data handling nodes is a network processor configured to receive one of the data packets from and configured to transmit another of the data packets to said packet-based network, said network processor configured
 - a) in the case of a data packet received from said data network,
 - to detect a type of payload data from said network-based packet header data,
 - to remove said network-based packet header data from said packet, and
 - to associate with said packet an identifier which specifies a route across said routing arrangement to a target data handling node and a data handling operation to be carried out by said target data handling node, and
 - b) in the case of a data packet received from another data handling node and having an associated packet identifier,
 - to detect a type of payload data from said packet identifier,
 - to remove said packet identifier,
 - to apply network-based packet header data in dependence on said packet identifier, and
 - to launch said data packet onto said network.

The Official Action cited Asynchronous Transfer Mode (ATM) Signaling element 84 and paragraph [0069] of McCormack as corresponding to the Claim 1 recited “*a plurality* of data handling nodes.” However, McCormack describes that this *single* component - the ATM Signaling element – is responsible for the creation of virtual circuits (VCs) on an Asynchronous Transfer Mode link (Notably packet-based network link – see [0008] of McCormack) and communication over them. Thus, McCormack merely describes handling the routing of packets to different destinations over pre-set virtual circuits (see also paragraphs [0089] and [0096] of McCormack). Hence, McCormack does not disclose or

suggest the claimed plurality of data handling nodes, and, therefore cannot provide a network interface as defined in Claim 1.

Accordingly, for similar reasons, McCormack does not disclose a data handling node configured to associate with a packet an identifier (not being a network based packet header) which specifies a data handling operation to be carried out by a target data handling node, as recited Claim 1. At best, data routing in McCormack is specified by the SVC/SVP/Channel ID. However, there is no separate feature of such an ID that specifies a data handling operation. Moreover, data routing in McCormack is different than the data handling as claimed.

Further, the Official Action cited paragraph [0072] of McCormack as corresponding to the Claim 1 recited “a) in the case of a data packet received from said data network, to detect a type of payload data from said network-based packet header data,” asserting that McCormack teaches making “intelligent decisions regarding how to transport different types of data through a network.” However, paragraphs [0063] to [0075] of McCormack describe that the MPCS is either explicitly informed about a packet’s contents (via the call server CS) or determines the contents from an initial call setup process (see also paragraph [0089]). Hence, McCormack does not disclose or suggest a network processor...configured to detect a type of payload data from the network-based packet header data as claimed.

Furthermore, the Official Action cited paragraph [0083] of McCormack as corresponding to the Claim 1 recited “a) in the case of a data packet received from said data network, to associate with said packet an identifier which specifies a route across said routing arrangement to a target data handling node,” asserting that McCormack teaches “the UDP and IP headers (or specified route) are added to the payload.” Indeed, paragraph [0083] of McCormack states “[t]o route the payload **through an IP network**, UDP and IP headers are added....” In contrast, the claimed network interface contains the relevant routing

arrangement, and an identifier specifies a route across said routing arrangement to a target data handling node. Moreover, the claimed identifier is a replacement for a network-based packet header. See page 26, lines 4-21 of Applicant's specification. Therefore, McCormack differs from the claimed network interface in that McCormack is directed to routing through an IP network, and is *not* wholly within the network interface itself. Further, McCormack is directed to a network-based packet header such as UDP or IP, whereas the identifier in Claim 1 part (a) specifically replaces such a header.

Moreover, the Official Action cited paragraph [0098] of McCormack as corresponding to the Claim 1 recited "a) in the case of a data packet received from said data network, to remove said network-based packet header data from said packet," asserting that McCormack teaches stripping the header from the packet. However, paragraph [0098] - [0099] and Figure 4 of McCormack describe how an IP-AAL2-IP communication is achieved. The source IP data in McCormack has its packet header removed by the first MPCS. The payload is then sent (using the ATM signalling component discussed above) according to a predetermined virtual path (i.e. a static address) over the AAL2 network in accordance with the ATM model (see also paragraph [0096]). Meanwhile, the original IP header is sent via a UDP/IP link (see also paragraph [0097]). As described in paragraph [0099], the second MPCS receives the payload from the virtual path, and then also receives the original IP header from the separate UDP/IP link and recombines them.

Accordingly, McCormack describes stripping the IP header at a first network interface, then sending the payload over a pre-established route on another network, and then re-attaching the header at a second network interface that receives the payload from that other network. In combination with paragraph [0083] discussed above, this feature in McCormack is asserted as correlating with the claimed removal of the network-based packet header from

said packet and the association with the packet of an identifier for routing the packet within the network interface to another data node of the network interface.

Applicant points out the following differences between the claimed invention and McCormack in light of the previous two paragraphs. First, the route/virtual path in McCormack is *over a network* between *two* MPCS's. By contrast, the claimed route is *internal* to a *single* network interface. Second, the route/virtual path in McCormack is preset at call setup (see Paragraph [0089]). By contrast, claimed route is responsive to the appropriate target of that individual data packet. Third, the operability of the network in McCormack relies on the feature that the IP header is necessarily sent to the second MPCS via a separate route, and that it is reattached to the payload data, as described both in paragraphs [0098] and [0099]. Applicant's respectfully submit that only by impermissible hindsight reconstruction would one know how to avoid such a configuration. By contrast, the claimed IP header is neither re-routed nor re-used.

Therefore, for all of the above reasons, McCormack does not disclose or suggest "a network interface," as defined in Claim 1, and Mayhew does not cure this deficiency. Consequently, as McCormack and Mayhew do not disclose or suggest all the elements of Claim 1, Claim 1 (and Claims 2-16 dependent therefrom) is patentable over McCormack in view of Mayhew.

Rejection of Claims 1-21 as unpatentable over Ozawa and Bailey and Official Notice.

The Official Action has further rejected Claims 1-21 under 35 U.S.C. § 103 as unpatentable over Ozawa and Bailey. The Official Action asserts that Ozawa describes all of the Applicant's claimed features with the exception of the case of a data packet having an associated packet identifier in accordance with the Applicant's claims. However, the Official Action cited Bailey as describing this more detailed aspect of the Applicant's claimed

advancements, and states that it would have been obvious, to one of ordinary skill in the art at the time the advancements were made, to combine the cited references for arriving at the Applicant's claims. Further, the outstanding Office Action takes Official Notice that both "the data type or payload type based on the packet ID" and "a demultiplexing operation could remove the unneeded header information to prepare the data to be displayed" are well known in the art. Applicant respectfully traverses the rejection.

The Official Action cited Internet 44 of Figure 1 of Ozawa as corresponding to the previously recited "a network interface connectable to a packet-based data network on which a plurality of different types of payload data are distinguished by network-based packet header data." Further, the Official Action appears to cite either service provider 10 or service provider host 38 of Ozawa as corresponding to the claimed network interface, as service provider 10 and service provider host 38 are the only present elements which can be interpreted as being connected to the Internet 44. It is noted that Figure 1 of Ozawa refers to an exemplary system, and is not specifically directed to the invention of Ozawa.

The Official Action further cited the service provider 10 of Ozawa as corresponding to the claimed plurality of data handling nodes. In light of the previous paragraph, this would imply that either the service provider 10 is cited as corresponding to both the claimed network interface and the claimed data handling nodes, or that the data handling nodes (service producer 10 of Ozawa) must contain the network interface (service provider host 38 of Ozawa). However, neither arrangements properly corresponds with the network interface as defined in Claim 1.

Further, the Official Action cited Col. 5, lines 36-59 of Ozawa as corresponding to the previously recited "a routing arrangement responsive to a packet identifier for routing data packets between said data handling nodes, in which one of said data handling nodes is a network processor for receiving one of the data packets from and transmitting another of the

data packets to said packet-based network,” asserting that Ozawa teaches a demultiplexer and packet ID, audio, video, data type. Column 5, lines 36-59 of Ozawa describes Figure 2, which depicts a typical system configuration for a set top box 22 and the features described are part of an entirely separate device that is linked to the service provider 10 by a cable or satellite link. Thus, Ozawa in no way discloses a network interface (service provider 10 or host 38 of Ozawa) comprising a routing arrangement (elements of the set-top box 22 of Ozawa) as claimed. Rather, Ozawa explicitly describes that they these elements are wholly separate, remote devices.

Column 3, lines 44-66 of Ozawa was cited in the Action as corresponding to the claimed “b) in the case of a data packet received from another data handling node and having an associated packet identifier, to detect a type of payload data from said packet identifier, to remove said packet identifier, to apply network-based packet header data in dependence on said packet identifier, and to launch said data packet onto said network,” asserting Ozawa teaches table ID filtering. However, this passage merely lists different transmission media by which TV channels can be sent to a set-top box (cable, satellite, etc.).

Indeed, table ID filtering, as described in Col. 1, lines 49-58 and Col. 8, lines 48-58 of Ozawa, is used in relation to demultiplexing the transport stream received by the set-top box. Hence, with respect thereto, Applicant respectfully submits (1) the set top box 22 is an entirely separate entity from the service provider 10 and cannot reasonably be construed as being contained within service provider (Claim 1 “network interface, *comprising...*”), and (2) data is received at the set top box for display or for use within the set top box. Accordingly, there is no disclosure of a “network-based packet header data in dependence on said packet identifier, and to launch said data packet onto said network,” as recited in Claim 1. In fact, the set top box of Ozawa is an end-point for the data. Hence, Ozawa does not disclose or suggest “a network interface,” as defined in Claim 1.

To remedy the deficiencies of Ozawa, the Official Action takes Official Notice that Settle teaches “the data type or payload based on the packet ID,” and that Coffin teaches “a demultiplexing operation could remove unneeded header information to prepare the data to be displayed.” However, Settle and Coffin do not cure the deficiencies of Ozawa argued above.

Therefore, for all of the above reasons, Ozawa does not disclose or suggest “a network interface,” as defined in Claim 1, and Bailey and Official Notice do not cure this deficiency. Consequently, as Ozawa, Bailey, and Official Notice do not disclose or suggest all the elements of Claim 1, Claim 1 (and Claims 2-16 dependent therefrom) is patentable over Ozawa in view of Bailey for all of the above reasons.

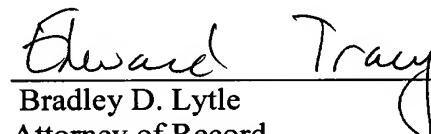
Regarding the rejection of Claims 17 and 20, these claims recite features similar to Claim 1, however independent Claim 17 is a method claim and independent Claim 20 is a computer readable storage medium claim. Accordingly, just as McCormack, Mayhew, Ozawa and Bailey do not disclose or suggest all of the elements in Claim 1, similarly, McCormack, Mayhew, Ozawa and Bailey do not disclose or suggest all of the elements in Claims 17 and 20. Accordingly, it is respectfully submitted that McCormack, Mayhew, Ozawa and Bailey do not anticipate or make obvious the features of Claims 17 and 20. Therefore, Claims 17 and 20 are believed to patentably define over this applied art.

CONCLUSION

Consequently, in view of the present amendment and in light of the above discussion, the outstanding grounds for rejection are believed to have been overcome. The application as amended herewith is believed to be in condition for formal allowance. An early and favorable action to that effect is respectfully requested.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.



Bradley D. Lytle
Attorney of Record
Registration No. 40,073

Edward W. Tracy, Jr.
Registration No. 47,998

Customer Number
22850

Tel: (703) 413-3000
Fax: (703) 413 -2220
(OSMMN 08/07)